

XXII. *An Account of a new Purging Spring discovered at Dulwich in Surrey, by Mr. John Martyn, F. R. S. Prof. Botan. Cantab.*

DUlwich is a Village lying about Six Miles South of London, at the Foot of that Ridge of Hills which divides the Counties of Kent and Surrey. The Purging Springs, which have been esteemed for about a hundred Years, and are commonly known by the Name of *Dulwich Waters*, have been improperly so called; those Springs arising in a Valley on the South Side of those Hills, in the Middle of a large Common belonging to the Parish of Lewisham in Kent; whereas *Dulwich* is on the North Side of the Hills, in the Parish of Camberwell in Surrey.

There has not been any medicinal Spring observed in *Dulwich*, before that which is the Occasion of this Discourse.

In the Autumn of 1739, Mr. Cox, the Master of a well-known House of good Entertainment, called the *Green Man* at *Dulwich*, lying about a Mile beyond the Village, was desirous to dig a Well for the Service of his House, there being no Spring of good Water near it. And as it was probable, that he would be obliged to dig pretty deep, I was willing to observe what *Strata* of Earth he dug through. The first 20 Feet in Depth seemed to be only the Clay, which, in a long Tract of Time, had been washed off from the steep Hill, at the Foot of which his House is situated. It was intermixed with Pieces of Roots and Leaves, and with other Fragments of vegetable Sub-

stances. In digging 40 Feet deeper, the Clay was found of various Colours, brown, blueish, and black; intermixed with a considerable Number of *Pyritæ* or Copperas Stones, and some pretty large Masses of the Waxen-vein or *Ludus Helmontii*, which is also found in great Plenty on the Sea-shore near the *Spaw* at *Scarborough*.

The Well being digged to the Depth of 60 Feet, and no Water appearing, Mr. *Cox* caused it to be covered up, and gave himself no farther Trouble about it that Winter. The following Spring, on my coming down, it was opened. I found 25 Feet of Water, of a sulphureous Smell and Taste, which went off, after the Well had been opened some Days.

As I had a strong Suspicion, that this Water was impregnated with some Mineral, I made an Inquiry into the Nature of it by the following Experiments :

1. It curdled Milk.
2. It became green, when mixed with Syrup of Violets, which Colour disappeared in a few Days.
3. Being poured on Green Tea, it did not acquire any Colour.
4. Being mixed with powdered Galls, it acquired a deeper brown Colour than Rain-water did, and continued turbid; whereas the Rain-water continued clear, after the Galls were subsided.
5. Being shaken in a close-stopped Phial, it disiploded a Vapour on opening the Phial before the Commotion ceased, with a more audible Noise than common Water did.
6. Being mixed with Oil of Vitriol, and Oil of Tartar, a much more considerable Ebullition was raised,

raised, than by the Mixture of those Liquors with Rain-water.

7. Six Quarts of this Water, being boiled to a Pint, let fall a large Quantity of a fine, whitish, insipid Powder; and the Water so boiled had a very strong saline Taste, with a Mixture of Bitterness, not unlike the *Sal catharticum amarum*,

8. It let fall a copious white Sediment, on the Addition of the Oil of Tartar, which has the same Effect on a Solution of Alum, or of *Sal catharticum amarum*.

9. The boiled Water, after it had deposited its Earth, precipitated large white Flakes, on the Addition of Oil of Tartar.

10. It differs from a Solution of common Salt. For the Oil of Tartar, being dropped into that Solution, caused only a slight Precipitation, which was soon afterwards absorbed again by the Water.

11. It does not lather with Soap.

Having made these Experiments, I was satisfied, that this new Spring was really a Purging Water, as it has since been found by Experience. Some of Mr. Cox's Family drank of it with Success, which encouraged several other Persons to try it, to their great Advantage.

Being drank fresh, in the Quantity of Five half pint Glasses, it purges quickly, not sinking, but raising the Spirits.

It is found to be very diuretic.

These Properties of the *Dulwich Water* do not seem to be owing to any of the Materials found in digging the Well. The *Pyritæ* are known to be a Mixture of Iron and Sulphur; but this Water seems

to have hardly any Parts of Iron in it [Exp. 3. and 4.]. The Spirit, with which it abounds, [Exp. 5. and 6.] may, perhaps, be owing to a Fermentation of the Sulphur, which is continually flying off, as appears by the strong Smell of it, after it has been for some time covered up. And Mr. *Cox* has lately informed me, that a silver Cup, which has been often used in drinking this Water, has acquired a yellowish Colour.

The *Ludus Helmontii* affords nothing but Iron. Nor does the Clay, through which they dug, discover any Salt in its Composition. We may therefore conclude, that the Hill, which lies between the old Wells and this new one, contains the Purging Salt, with which these Waters are impregnated.

I do not find any material Difference between the old and new Waters, except in the Convenience of drinking them. The old Wells are at a Distance from any House, except some few Huts, and exposed to the Rain and Land-floods, by which they are often injured: The new Well is a Mile or two nearer to *London*, well secured from any Injuries of the Weather.

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John Martyn.